

IN THE CLAIMS:

Please replace current claim 1 with the following:

1. (Amended) A system for sensing the temperature of a vessel wall, including an arterial wall, the system comprising:
- an elongated catheter having a distal end and a proximal end;
 - a sliding filament that protrudes from both ends of the catheter, the protruding filament at the proximal end of the catheter acting as a manually operated expansion control;
 - a temperature sensing tip including one or more presentation elements, each element having a temperature sensor supported thereon;
 - each presentation element having a proximal end coupled to the distal end of the catheter and a distal end coupled to the distally protruding end of the filament such that pulling on the manually operated expansion control causes each element to move from a retracted position to an expanded position enabling the sensor to be placed in contact or immediately proximate to the vessel wall, and pushing on the manually operated expansion control causes each presentation element to return to the retracted position from the expanded position; and
 - a data unit operative to receive electrical signals from the temperature sensors and display information indicative of vessel wall temperature.

Please replace current claim 3 with the following:

3. (Amended) The system of claim 1, wherein the presentation elements are thermally insulative so that the sensors are isolated from temperature fluctuations caused by blood flow or other ambient conditions.

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Please replace current claim 5 with the following:

5. (Amended) The system of claim 1, wherein the presentation elements are configured such that blood may continue to flow around the elements when the elements are in the expanded position.

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[Please replace current claim 6 with the following:]

6. (Amended) A system for sensing the temperature of the wall of a vessel including an arterial wall, comprising:

an elongated catheter having a distal end and a proximal end;

a sliding filament that protrudes from both ends of the catheter, the protruding filament at the proximal end of the catheter acting as a manually operated expansion control;

a temperature sensing tip including a plurality of presentation elements in the form of cantilevered fingers which expand outwardly by pulling on the manually operated expansion control, each element having a temperature sensor supported thereon which is placed in contact or immediately proximate to the vessel wall during the expansion; and

a data unit operative to receive signals from the temperature sensors and display information indicative of vessel wall temperature as sensed by the sensors.

[Please replace current claim 7 with the following:]

2. 7. (Amended) The system of claim 1, wherein the cantilevered fingers are configured to provide a relatively constant and uniform force against the vessel wall.

[Please replace current claim 8 with the following:]

5. 8. (Amended) The system of claim 6, wherein the fingers surround a central plunger coupled to the manually operated expansion control, such that pulling on the plunger causes the fingers to expand outwardly and pushing on the plunger causes the finger to turn to a contracted position.

[Please replace current claim 9 with the following:]

4. 9. (Amended) The system of claim 3, wherein the plunger is conically shaped.

Please replace current claim 11 with the following:

9. 11. (Amended) The system of claim 1, wherein the temperature sensing tip features a plurality of longitudinal slices forming a basket-like structure which flares out when the manually operated expansion control is pulled, and which collapses when the control is pushed.

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Serial No. 09/882,889

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Please replace current claim 14 with the following:

13/14 (Amended) The system of claim 13, wherein the temperature sensors are hardwired to the data unit, and the groove extends the length of the catheter to receive the wires.

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